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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,658	07/15/2004	Hiroataka Kawabata	MAT-8577US	4898
23122	7590	02/20/2008		
RATNERPRESTIA P O BOX 980 VALLEY FORGE, PA 19482-0980			EXAMINER HAMO, PATRICK	
			ART UNIT	PAPER NUMBER
			3746	
			MAIL DATE	DELIVERY MODE
			02/20/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/501,658	Applicant(s) KAWABATA ET AL.	
	Examiner Patrick Hamo	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 4-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to amendments filed on September 17, 2007.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al., Pub. No. 2002/0061254 in view of Nakayama et al., Pat. No. 6,477,938.

Morita discloses in the fifteenth embodiment (figs. 18 and 19) a refrigerant compressor comprising a closed container 1, a compressor section (4 and 5) accommodated in the closed container for compressing refrigerant, a driver 3 for driving the compressor section, wherein a piston 5 and a cylinder 4 form first and second contact sections that slide against each other when the compressor is driven, and recesses 334a formed on a surface of the piston 5, wherein the recesses are shaped to maintain a constant distance between the piston and cylinder as they move with respect to each other (paragraph 0221, p. 15), and oil is retained in the recesses (paragraph 0216, p. 15).

Morita discloses all of the limitations substantially as claimed except that the recesses are spaced from each other sufficiently for forming oil uniformly between the contact sections and that the recesses are spherical in shape.

However, in the fifteenth embodiment, Morita teaches that the recesses generate a dynamic pressure that reduces coolant gas leaking through the slide surface between the piston 5 and the cylinder 4 (paragraph 0222, p. 15), a result of the undisclosed fact that the generated dynamic pressure distributes oil in a mostly uniform manner so as to produce a stronger seal. Therefore it was obvious that the compressor of Morita had the recesses arranged such that oil was formed uniformly and gas leakage was minimized.

In response to the claimed limitation that the plurality of recesses are each spherical in shape, Nakayama teaches a shoe 1 and a piston in sliding contact with each other, a space 4 defined between the two by recess 2B in the piston and recess 1C in the shoe. The recess 1C is arcuate in section, giving the recess a substantially spherical shape. When the piston is driven through the shoe for reciprocating motion, lubricant oil which was stored in the recess 4 permeates into sliding contact regions of the contact region between the piston and shoe, lubricating and cooling these regions (col. 2, ll. 51-64). Because Nakayama teaches a method of providing lubricating recesses for arcuate contact sections and Morita discloses arcuate sections in sliding contact, it would have been obvious to one of ordinary skill in the art at the time of the invention to have substituted the spherical recesses as taught by Nakayama to provide lubrication for the recesses of Morita to achieve the predictable result of lubricating the sliding contact sections.

Response to Arguments

Applicant's arguments with respect to claims 1-3 and 29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Hamo whose telephone number is 571-272-3492. The examiner can normally be reached on M-F 8:30-5.

Art Unit: 3746

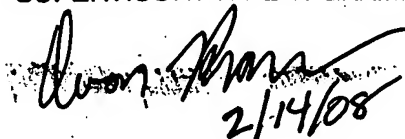
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



PH

DEVON KRAMER
SUPERVISORY PATENT EXAMINER


2/14/08